



**ADVANCED
MATERIALS**

*Reshoring the United
States Boron Supply Chain*

September 2024

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This Presentation has been prepared by 5E and includes market data and other statistical information from third-party sources, including independent industry publications, government publications or other published independent sources. Although 5E believes these third-party sources are reliable as of their respective dates for the purposes used herein, neither we nor any of our affiliates, directors, officers, employees, members, partners, shareholders or agents make any representation or warranty with respect to the accuracy or completeness of such information. Although we believe the sources are reliable, we have not independently verified the accuracy or completeness of data from such sources. Some data is also based on 5E’s good faith estimates, which are derived from our review of internal sources as well as the third-party sources described above. Additionally, descriptions herein of market conditions and opportunities are presented for informational purposes only there can be no assurance that such conditions will actually occur or result in positive returns.

CAUTIONARY NOTE REGARDING RESERVES

Unless otherwise indicated, all mineral resource estimates included in this Presentation have been prepared in accordance with and are based on the relevant definitions set forth in, the SEC’s Mining Disclosure Rules and Regulation S-K 1300 (each as defined below). Mining disclosure in the United States was previously required to comply with SEC Industry Guide 7 under the Exchange Act (“SEC Industry Guide 7”). In accordance with the SEC’s Final Rule 13-10570, Modernization of Property Disclosure for Mining Registrant, the SEC has adopted final rules, effective February 25, 2019, to replace SEC Industry Guide 7 with new mining disclosure rules (the “Mining Disclosure Rules”) under sub-part 1300 of Regulation S-K of the Securities Act of 1933, as amended (the “Securities Act”) (“Regulation S-K 1300”). Regulation S-K 1300 replaces the historical property disclosure requirements included in SEC Industry Guide 7. Regulation S-K 1300 uses the Committee for Mineral Reserves International Reporting Standards (“CRIRSCO”) - based classification system for mineral resources and mineral reserves and accordingly, under Regulation S-K 1300, the SEC now recognizes estimates of “Measured Mineral Resources”, “Indicated Mineral Resources” and “Inferred Mineral Resources”, and require SEC-registered mining companies to disclose in their SEC filings specified information concerning their mineral resources, in addition to mineral reserves. In addition, the SEC has amended its definitions of “Proven Mineral Reserves” and “Probable Mineral Reserves” to be substantially similar to international standards. The SEC Mining Disclosure Rules more closely align SEC disclosure requirements and policies for mining properties with current industry and global regulatory practices and standards, including the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, referred to as the “JORC Code”. While the SEC now recognizes “Measured Mineral Resources”, “Indicated Mineral Resources” and “Inferred Mineral Resources” under the SEC Mining Disclosure Rules, investors should not assume that any part or all the mineral deposits in these categories will be converted into a higher category of mineral resources or into mineral reserves. For additional information regarding these various factors, you should carefully review the risk factors and other disclosures in the Company’s filings with the SEC. Additionally, 5E undertakes no obligation to comment on third-party analyses or statements regarding 5E’s actual or expected financial or operating results or its securities.

5E Advanced Materials Summary

- ✓ 5E Advanced Materials trades on the Nasdaq and the ASX Stock Exchange
- ✓ Largest known new conventional (colemanite) boron deposit globally outside of Turkey
- ✓ Initial mine life of 31 years and 171M ton resource containing 7.9M tons of boric acid¹
- ✓ Currently in production at the 5E Boron Americas Complex to prove a path to commercial scale
- ✓ 5E will operate across the value chain: resource extraction, refinement, and distribution
- ✓ Commercial production fully permitted (90ktpa) with phased expansion plans²

CALIFORNIA

NEVADA

FORT CADY
INTEGRATED
BORON
FACILITY

PORT OF LA

PORT OF
LONG BEACH

PROJECT
LOCATION



MILES 150

RAIL LINE

1. Regulation S-K 1300 Initial Assessment Report with a revised report date of February 2, 2024 (using 2% cut off grade) prepared by Qualified Person. Figures presented reflect total estimated measured, indicated and inferred resources combined.
2. Existing UIC permit enables commercial production and has approximately a 25-year operation and a 5-year restoration life.

5E Advanced Materials Investment Thesis

Exposure to critical materials **Boron** and **Lithium**

Critical for reshoring U.S. defense supply chains, decarbonization and food security

Designated as Critical Infrastructure by the Cyber Security & Infrastructure Security Agency (CISA), which operates under the Department of Homeland Security (DHS)

A producing asset that is already permitted to scale operations to meet growing product demand

Market is currently an oligopoly with pull sell side demand fundamentals and a growing supply imbalance

Technically superior resource and fully permitted for commercial scale

Mining & Environmental Advantage

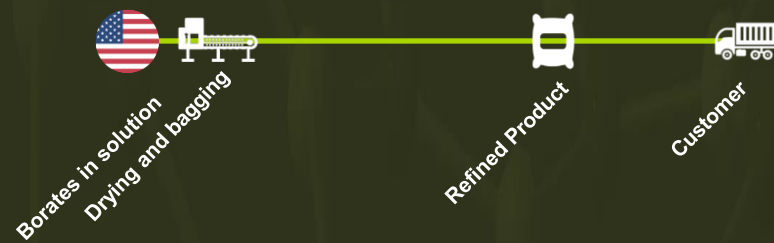
In-Situ Mining¹

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- ✓ Low land disturbance
- ✓ Efficient Processing
- ✓ No tailings dam storage
- ✓ Minimal Excavating Equipment

Streamlined
Production and Processing

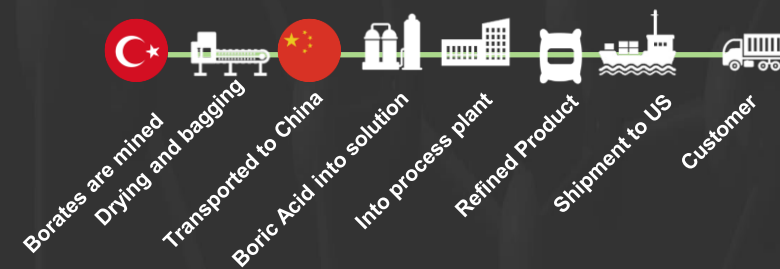


Hard Rock Mining



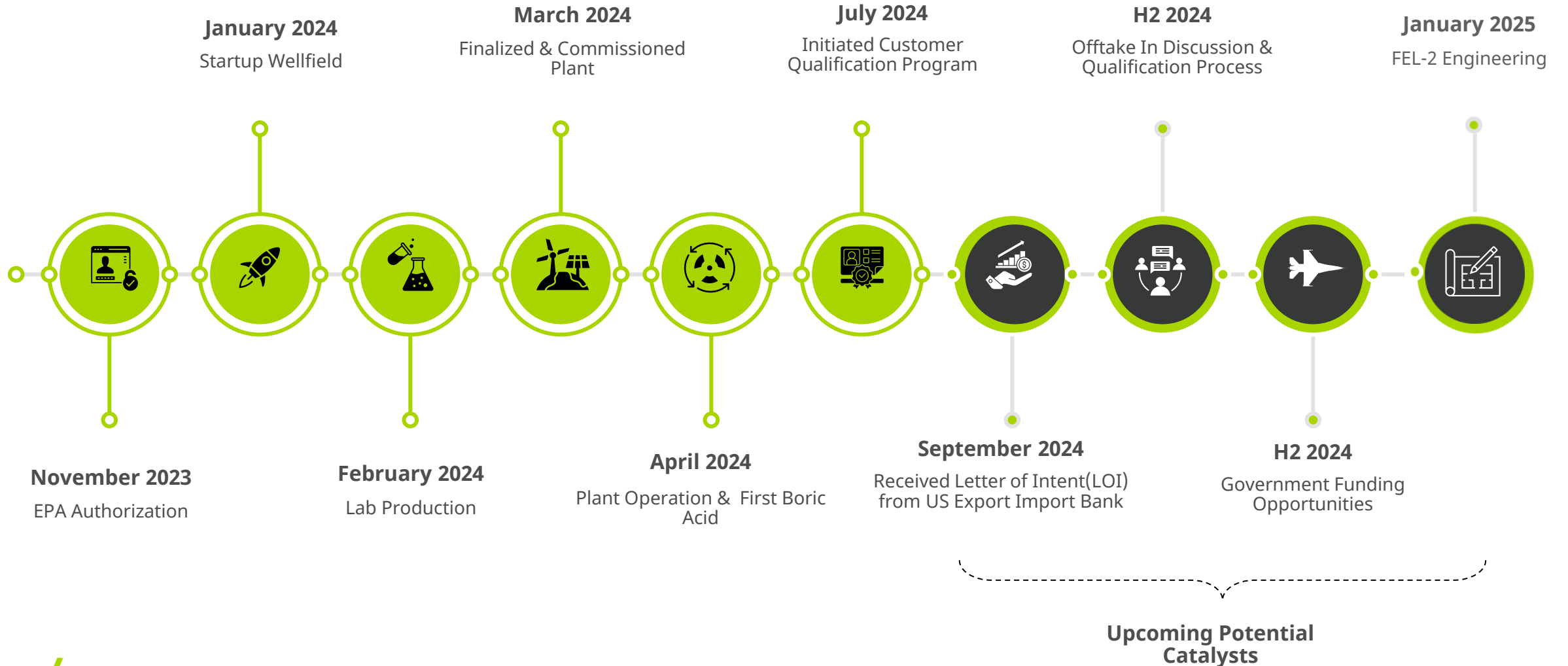
- ✗ Risk of pit collapse
- ✗ Equipment and labor intensive
- ✗ Significant surface area needed
- ✗ Tailings storage

Multi-Location
Production and Processing



¹ <https://www.visualcapitalist.com/sp/everything-you-need-to-know-about-in-situ-mining/#:~:text=Advantages%20of%20In%2DSitu%20Mining,operate%20without%20moving%20a%20rock>

Milestones Achieved & Upcoming Potential Catalysts



The 4 Pillars of Project Execution



1. Optimize CAPEX and OPEX:

- Well-field and process optimization
- Developed power solutions
- Value-added byproducts



2. Data Collection and Ramp-up:

- Production quality achieved
- Ramp-up to higher rates
- Deliver product to key customers



3. FEL-2 Engineering:

- Complete Pre-feasibility report
- +/-25% CAPEX and OPEX estimates¹
- Foundation for debt financing



4. Customer Qualification and Off-Take:

- Complete customer qualification
- Negotiate off-take agreements
- Customer debt/investment financing

Catalysts expected to Increase NPV and Lower Commercial Cash Costs



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Project Finance Program

Commercial Phase 1 Project Funding Opportunities

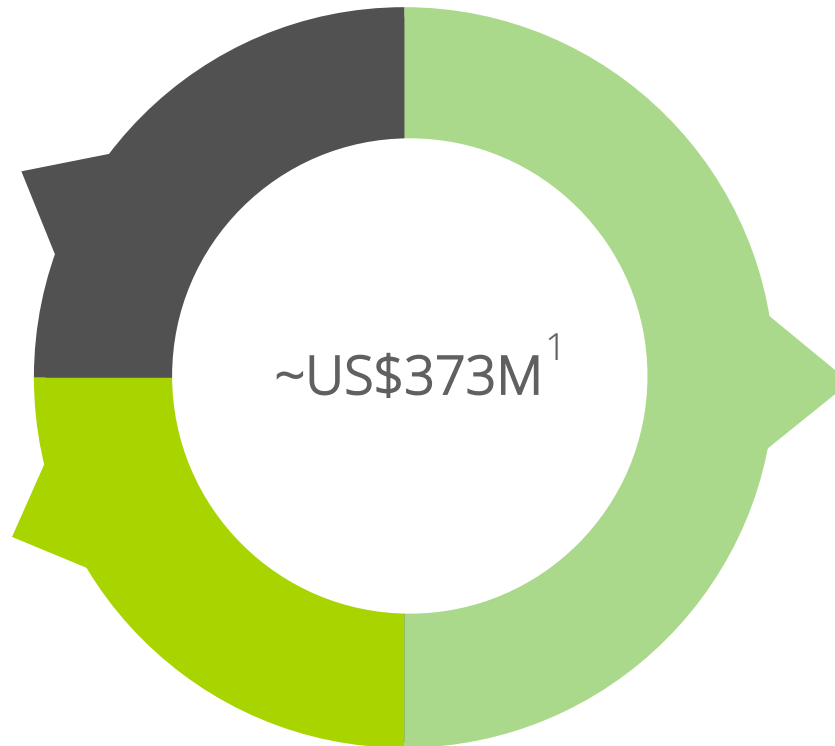
Traditional Equity

- Capital Markets
- Existing Shareholders
- Institutional and Retail



Non-Dilutive Funding

- Customer Investments
- Grant Funding
- Royalty Agreements



Project Finance Facilities

- Traditional Project Finance
- Export Import Credit Bank
- DOE Loan Programs – Title 17



1. Regulation S-K 1300 Initial Assessment Report with a revised report date of February 2, 2024 (using 2% cut-off grade) prepared by Qualified Person. Capital number includes Phase I, 90,000 short tons of boric acid production.

* Graphic not intended to reflect any estimated proportions of sources of funding.

United States Government – Funding Support Opportunities

FUNDING SOURCES

Department of Defense

- Defense Production Act, DPA Title III
- NDAA Funding Bill



Department of Energy

- Loan Program Office
- AMMTO Program



Export Import Bank

- Credit Facility to backstop private project finance through US Treasury



DOD

DOE

EXIM

Non-Dilutive Financing

FEAM State of the Union

Department of Defense

- Multiple applications for funding already in progress
- Funding focused on increasing current production, as well as boron derivate products

Department of Energy

- AMMTO Funding Application in evaluation to fund work to increase lithium extraction rates at the 5E Boron Americans Complex

Export Import Bank

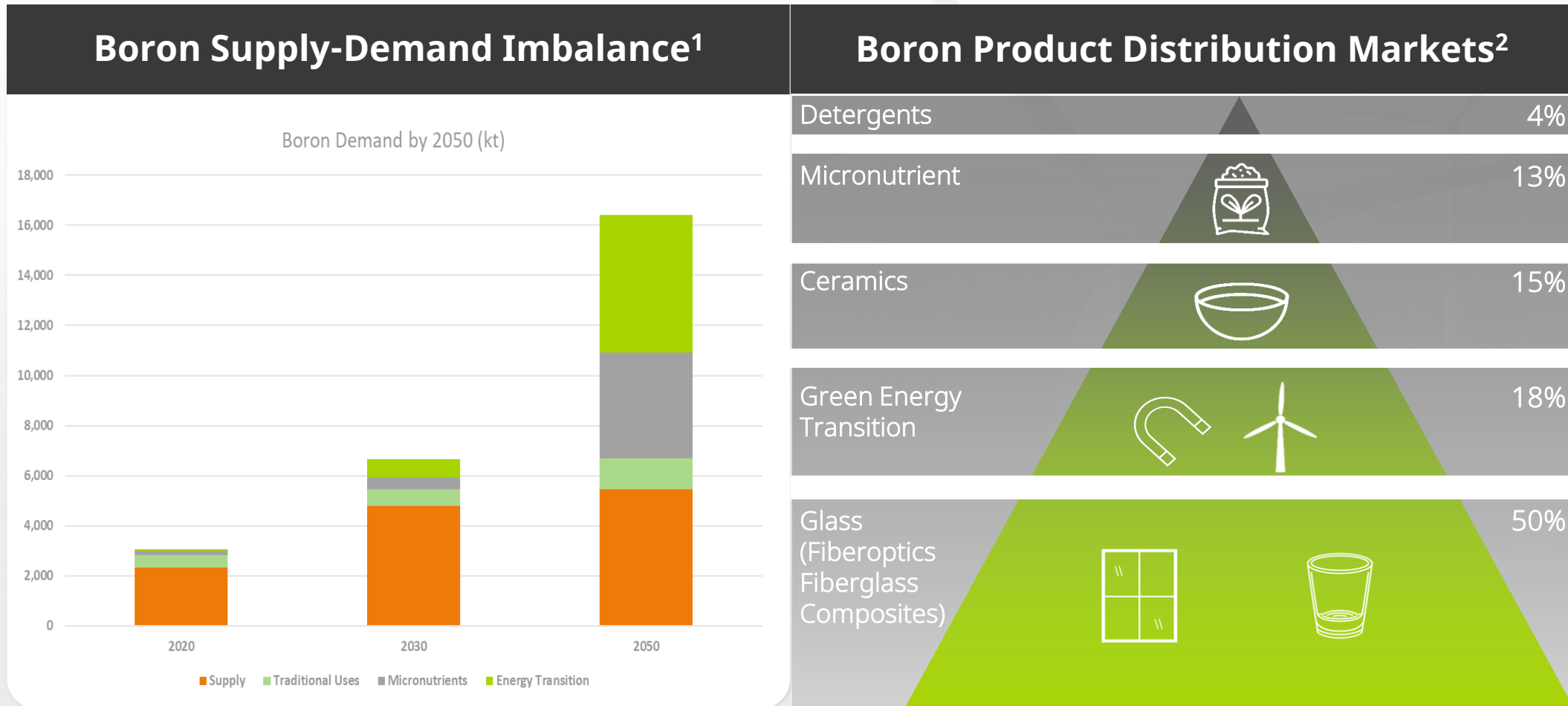
- Seeking Letter of Support that will backstop all project finance the procures in the private sector



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The Global Boron Market

Why 5E? A pure-play boron investment opportunity



Note: Elemental boron figures converted to boric acid equivalent at a ratio of 1-to-5.72.

¹ Reflects management's estimates and forecasts of 'high demand' scenario, based on (among other sources) certain data provided in the following: (a) Eti Maden: 2021 Boron Sector Report; (b) Credit Suisse Equity Research Kline Market Report and Global Market Insights; and (c) Kline Market Report and Global Market Insights. Management estimates that under a 'low demand' scenario, boron demand will increase by ~2x in 2030 and ~4x in 2050 relative to 2020.

² Regulation S-K 1300 Initial Assessment Report with a revised report date of February 2, 2024 (using 2% cut-off grade) prepared by Qualified Persons.

Boron Market Segments

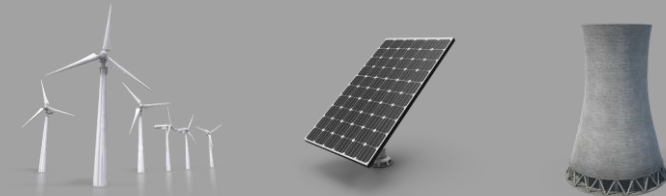
Electric Vehicles and Permanent Magnets

- Widely used (and largely not substitutable) across Electrification of Transport
- Key driver of demand in magnets needed for electric motor permanents



Global Energy Transition

- Critical material used in wide range of decarbonization technologies (wind, solar, and nuclear)
 - Decreasing costs of renewable energy technologies and inputs have made them cost-competitive with fossil fuels



Traditional Applications

- Historical uses include:
 - Glass (borosilicate glass, fiberglass composites)
 - Ceramics
 - Cleaning agents



Food Security

- Up to 40 % of Earth's land is degraded, threatens roughly half of global GDP (US\$44 trillion)¹
- Boron is an essential micronutrient for crop health and to increase crop yields
- Boron based fertilizers are widely used commercially



\$2.15b global market 2023²

Global Boric Acid Demand CAGR of **5.4%**²

1.9M tons of new demand expected by 2031³

¹ Chronic land degradation: UN offers stark warnings and practical remedies in Global Land Outlook

² Global Market Insights, Boron Market – Industry Analysis & Forecast (2024-2030)

³ Kline Market Report

The Team to Deliver

Leadership Team



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BSc, MBA



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NON-EXECUTIVE DIRECTOR
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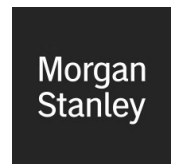
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Thank You